

- Brown, L. H., Urban, K. H. & Newman, K. 1982. *The birds of Africa*. Vol. 1. Academic Press, London.
- Cramp, S. & Simmons, K. E. L. (eds) 1980. *The birds of the Western Palearctic*. Vol. 11. Oxford Univ. Press.
- Del Hoyo, J., Elliott, A. & Sargatal, J. (eds) 1994. *Handbook of the birds of the world*. Vol. 2. Lynx Edicions, Barcelona.
- Dowsett, R. J., Fry, C. H. & Dowsett-Lemaire, F. 1997. *A bibliography of Afrotropical birds, 1971–1990*. Tauraco Res. Rep. 7. Tauraco Press, Jupille, Liège.
- Elgood, J. H., Heighham, J. B., Moore, A. M., Nason, A. M., Sharland, R. E. & Skinner, N. J. 1994. *The birds of Nigeria. An annotated check-list*. BOU Check-list no. 4, 2nd edition. British Ornithologists' Union, Tring.
- Giraudoux, P., Degauquier, R., Jones, P. J., Weigel, J. & Isenmann, I. 1988. Avifaune du Niger: état des connaissances en 1986. *Malimbus* 10: 1–140.

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Occurrence of the Cape Verde Shearwater *Calonectris edwardsii* on the Brazilian coast

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The Cape Verde Shearwater, *Calonectris edwardsii*, was described as a species by Oustalet (1883), and was later treated as a subspecies of Cory's Shearwater, *Calonectris diomedea*, although it was diagnosed as distinctly and easily separable from the latter. The phylogenetic analysis of the group, recently performed by Hazevoet (1995), indicates that the subspecies of *Calonectris diomedea* (*C. d. diomedea*, *C. d. borealis* and *C. d. edwardsii*) form an apparently paraphyletic group. For this reason Hazevoet considered valid the specific status given to the Cape Verde Shearwater. Since then, other authors have treated this biological form as a full species (e.g. Sibley 1996, Porter *et al.* 1997, Olmos & Martuscelli, in press).

Calonectris edwardsii is endemic to the Cape Verde Islands where it breeds in large colonies (Enticott & Tipling 1997), estimated at 10,000 breeding pairs (Hazevoet 1994). Information regarding its migration is scarce. It is, however, known that they are absent from the Cape Verde Islands during the non-breeding period (Cramp & Simons 1977). These authors suggest that the small number of individuals of *C. diomedea* which winter in western Africa could be *C. edwardsii*. Porter *et al.* (1997) also remark that the species probably disperses towards the South Atlantic.

Presumed immatures linger in the South Atlantic into the southern winter, and up to 20 birds/km were wrecked all down the east coast of Brazil (Lima 1994, Olmos *et*

al. 1995). Lima *et al.* (1997) mention finding a specimen of *C. edwardsii* on the northern coast of the state of Bahia, Brazil, in May and June 1996, and consider this to be the first reported for Brazil. On May 27-28, 1997, Olmos & Martuscelli (in press) observed two individuals at sea, close to the coast of the state of São Paulo (24°47'S, 44°32'W and 24°07'S, 43°48'W), following a fishing boat, associated with *C. diomedea* and other pelagic birds. Here, we present reports of *C. edwardsii* collected dead on the beaches of the south Brazilian coast.

In 1997 and 1998, monitoring was performed 13 times a month along 3,000 km of the coast of Rio Grande do Sul, Brazil. During the monitoring, all birds found dead were identified, measured, and the cause of death assessed. On 20 May 1998, three specimens of *C. edwardsii* were found between co-ordinates 30°25'S, 50°17'W and 30°52'S, 50°36'W. It proved impossible to determine the sex, because they were probably young individuals whose viscera were in an initial state of decomposition. The skeletons and skins were deposited in the scientific collection of higher vertebrates, at the Zoology Museum of the Universidade do Vale do Rio dos Sinos (numbers 563, 586 and 587). The biometric data collected (Table 1) agree with those given by Cramp & Simmons (1997) for *C. edwardsii*. These values are considerably smaller than those given by the same authors for *C. d. borealis* and *C. d. diomedea*, and also lower than those obtained by our team for *C. d. borealis* (Table 1, M. V. Petry, unpublished data). Cramp & Simmons (1997) state that *C. edwardsii* is approximately 10-15% smaller than *C. diomedea*. We observed that the characteristics which distinguish this species from *C. diomedea* are: shorter, dark bill, with a subterminal black band instead of large yellow bill of the Cory's; darker head and dorsum; relatively longer tail; general aspect smaller and slimmer than Cory's Shearwater. These characteristics are also referred to by other authors (Cramp & Simmons 1977, Harrison 1983, 1987, Enticott & Tipling 1997, Porter *et al.*, 1997).

TABLE 1

Measurements (mm) of three specimens of *Calonectris edwardsii* collected on the coast of Rio Grande do Sul State (data from deposited material on the UNISINOS Zoology Museum), and means of 164 specimens of *Calonectris diomedea borealis* collected on the coast of Rio Grande do Sul State

N.º of collection	Total length	Wing	Bill	Tail	Tarsus
<i>C. edwardsii</i>					
563	470	315	43.8	130	47.6
586	475	310	43.3	125	48.6
587	480	—	42.27	—	47.4
<i>C. d. diomedea</i>					
Means	526.9	349.9	54.3	133.1	

The data presented in this study represent the southernmost records of the distribution of *C. edwardsii* and, together with the recent observations in Brazil,

corroborate the hypothesis suggested by Porter *et al.* (1997) regarding the dispersion of the species toward the South Atlantic.

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References:

- Bourne, W. R. P. 1995. The movements of Bulwer's Petrel and the larger shearwaters in the Atlantic Ocean. *Sea Swallow*. 44: 49-52.
- Cramp, S. & Simmons, K.E.L. (Eds.). 1977. *The birds of the Western Palearctic*, Vol. 1. Oxford Univ. Press.
- Enticott, J. & Tipling, D. 1997. *Photographic handbook of the seabirds of the world*. New Holland, Netherlands.
- Harrison, P. 1983. *Seabirds, an identification guide*. Christopher Helm, London.
- Harrison, P. 1987. *Seabirds of the world, a photographic guide*. Christopher Helm, London.
- Hazevoet, C.J. 1995. *The birds of the Cape Verde Islands*. BOU Check-list No. 13. Tring.
- Lima, P.C., Lima, R.C.F.R., Fonseca-Neto, P.F. & Santos, S.S. 1997. Ocorrência e mortandade de aves oceânicas no litoral baiano em 1996, e segundo encontro de *Phoebastria fusca* (Hilsenberg 1822) para o Brasil. *Resumos do VI Congresso Brasileiro de Ornitologia*, Belo Horizonte. p.77.
- Olmos, F. & Martuscelli, P. (*in press*). Répteis, aves e mamíferos marinhos do litoral sul de São Paulo. In: Marques, O.A.U., Duleba, W. & Por, F.D. (Orgs.). *Ambiente, Flora e Fauna da Estação Ecológica Juréia-Itatins*.
- Oustalet, E. 1883. Description d'espèces nouvelles d'oiseaux provenant des îles du Cap-Vert. *Ann. Sci. Nat. (Zool.)* 16(5): 1-2.
- Porter, R., Newell, D., Marr, T. & Jolliffe, R. 1997. Identification of Cape Verde Shearwater. *Birding World* 10: 222-228.
- Sibley, C.G. 1996. *Birds of the world*. Thayer Birding Software V 2.0. CD-ROM.

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